File

State of California
The Resources Agency
DEPARTMENT OF WATER RESOURCES
DIVISION OF SAFETY OF DAMS

INSPECTION OF DAM AND RESERVOIR IN CERTIFIED STATUS

Name of dam Oroville Dam Dam No. 1-48 County Butte
Type of dam Earthfill Type of Spillway Gated Concrete Weir and Chute
Water is 12.53 feet above spillway crest and 95.67 feet below dam crest.
Weather Conditions Sunny, hot, calm
Contacts made Alex Samaan, Oroville Field Office
Reason for inspection Periodic Evaluation (2nd inspection)

Important Observations, Recommendations or Actions Taken

Monitor the displaced riprap on the upstream slope, near the dam crest. The area is 300 to 400 feet to the right of the sloping intake structure buoy line.

Conclusions

From the known information and the visual inspection, the dam, reservoir, and the appurtenances are judged satisfactory for continued use, pending completion of radial gate repairs.

Item No.*	Item Name and Observation and Comment
A1-A4	Dam - The visible portions of the embankment slopes, crest, and abutments were in good condition. No objectionable vegetation or rodent activity was observed. The riprap on the upstream slope was in good condition. Overall, the embankment appeared to be stable. This is supported by the survey monument data. However, a relatively small area near the dam crest showed indications of shallow sliding within the rock. The location was 300 to 400 feet right of the buoy line for the sloping intake structure. I recommended that the area be monitored using painted survey points. Alex Samaan agreed that this should be done. The left foundation gallery was essentially unchanged from the last inspection. Seepage was as expected. No fresh cracking or displacements were observed. Terminal S was unchanged. Seepage from the disconnected piezometer tubes continues. House T was satisfactory, except for a rodent problem that will be eliminated. Bidwell Bar Canyon Saddle Dam, Parish Camp Saddle Dam - The dikes were inspected last January. A second inspection was deemed unnecessary. Palermo Tunnel - The tunnel was passing about 14 cfs. The tunnel walls and crown were free of seepage, and appeared to be in very good condition. Water was running about 1-inch deep on the access walkway. Most of which seemed to be coming from a leak in the release valve access plate. The release valve was

Typed by wmp
Date 6/27/02
cc for Book/Owner/USFS/COE

Use Field Sheet Standard Numbers and Items (See Reverse Side)

W Remington 6/27/02
Inspected by WRemington
Date of Inspection 6/13/02
Date of Report 6/27/02
Photos taken? Yes X No
Sheet 1 of 3 Sheets

INSPECTION OF DAM AND RESERVOIR IN CERTIFIED STATUS

Name of Dam Oroville Dam No 1-48

Date of Inspection 6/18/02

Observations and Comments (Continued)

Item No.*	Item Name and Observation and Comment
	Palermo Tunnel cont. - leaking quite a bit, but remains functional. The guard valve appeared to be in satisfactory condition.
6,8,10	Spillway - The chute and walls were observed from the roadway deck and the upper chute floor. No signs of distress or misalignment were noted. The gate and mechanical equipment appeared to be in satisfactory condition, as did the gate superstructure. An exception was the ongoing deterioration of the bridge supports, as shown in photograph 1. This is getting to the point where a repair should be considered. Modification of gates 5 through 8 is on schedule. The contractor was preparing to sand blast structural plate inside a tent constructed for the purpose on the chute floor. Water control was necessary to divert leakage from gate seals and stoplogs. The right side seal on gate 3 was producing most of the leakage. Gate 8 - The trunnion beam has been installed. Removal and replacement of the trunnion anchor bearing pads was complete. Welding of structural plate reinforcement was in progress. Gate 7 - Structural repairs and application of the prime coat were complete. Gate 5 - The paint coating has been removed from the trunnion anchors, and the lifting frame has been installed.
14,16	Outlet - Five turbines we running. Unit 1 was out for replacement of the runner. The river outlets were closed. The sloping intake was not visited, but will be during the next inspection. I requested that I be contacted when the river outlet valves are tested following completion of repairs at unit one. I will inspect the outlet valves at that time.
17	Seepage - No indications of seepage were observed on the dam embankment or groins. Seepage started at elevation 798 in the left gallery. Total seepage at the gallery sump has been steady for the last month. The drainage in the emergency exit tunnel appeared to be about the same as usual. Seepage at House T and Terminal S was as expected. A known, clear, seep of several gallons per minute was observed on the slope adjacent to the Palermo Tunnel control house. The source appears to be the tunnel outlet channel.

INSPECTION OF DAM AND RESERVOIR IN CERTIFIED STATUS

Name of Dam Oroville Dam No 1-48

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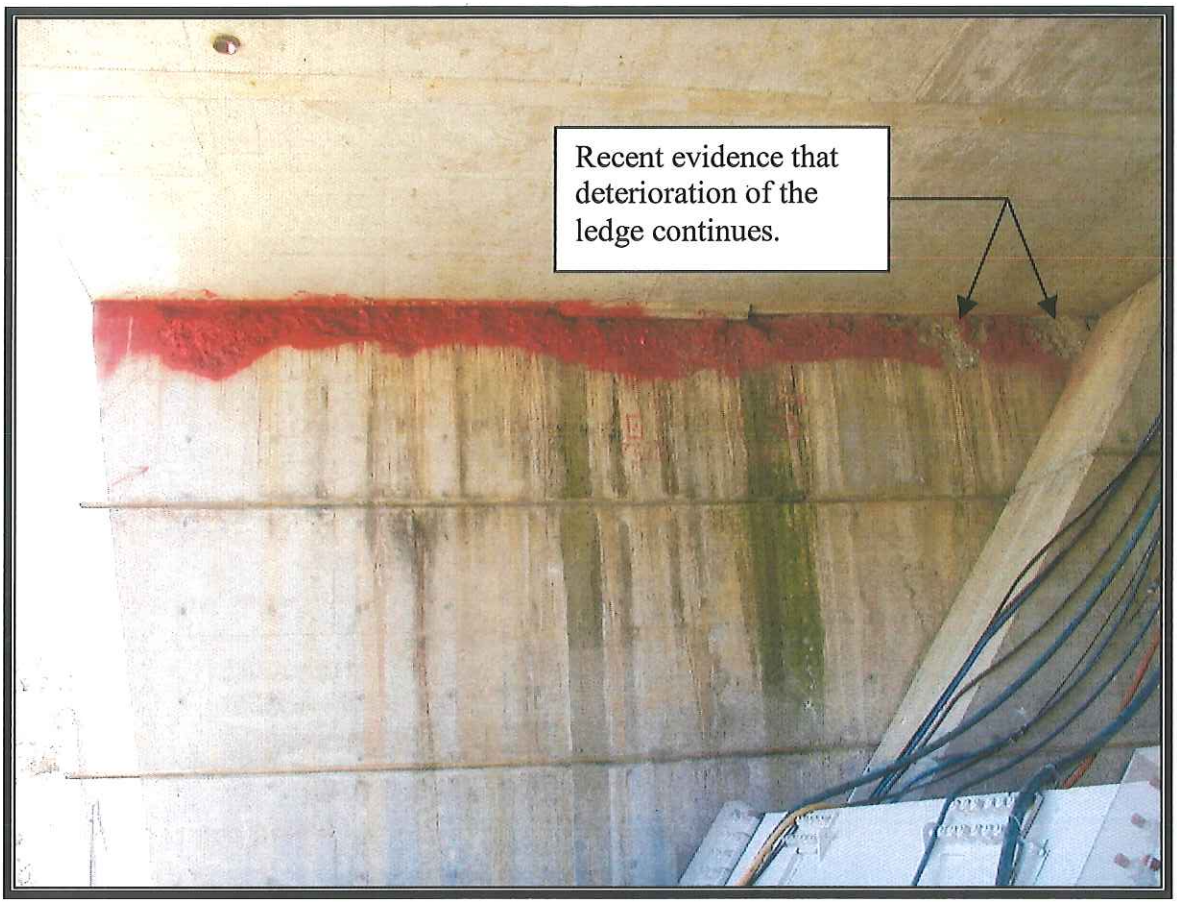
Observations and Comments (Continued)

Item No.*	Item Name and Observation and Comment
18	Instrumentation - The latest data submitted by O&M is an Instrumentation Performance Data and Evaluation report that includes data thru December 2001. This office has not completed a recent Instrumentation Data Review (IDR). Hydraulic piezometers: Most of the hydraulic piezometers have failed or are unreliable. Those still functioning remain within historical limits. Partly in response to this situation, the last Dam Safety Review Board recommended that the Department rely on seepage data and surface monuments to assess the performance of the dam. O&M is currently reviewing the instrument program for the Oroville/Thermalito complex and plans to make appropriate changes. Seepage: Combined internal drainage and total seepage at the toe weir have tracked the reservoir level and have remained within the historic range. Embankment settlement and horizontal movement: The movements appear to be consistent with historical trends, and indicate that the dam is stable.



1. This view of the right bridge abutment shows recent deterioration of the bridge support. Consideration should be given to devising a repair.

Oroville Dam, No. 1-48
Butte County
WPennington 6-18-02